

# HUMA-AIR.COM

*Market Leader In Accuracy*

**Welcome to Huma-Air. We design and manufacture brand- and model specific precision regulators for PCP air rifles.**

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By using only the highest quality materials such as aircraft grade aluminum, aluminum-bronze, chrome-moly steel and precision belleville springs, our ultra-compact regulators are high performing with less than 1% fluctuation.

**Regulator installation guide Hatsan BT65/Galatian/Gladius/AT44 / FX airguns / Air Arms S200 internal regulator / Spa M10/ Spa P12 / Daystate Huntsman /**



For adjustment tips, frequently asked questions and a complete list of installation manuals and instructions on how to adjust your Huma-Air regulator

<https://www.huma-air.com/Fitting-instructions>



Or go there directly by scanning the QR code

**Before you you start, realize this;**

- Working on a high pressure rifle could potentially be harmful or lethal to you or bystanders if you do not know what you are doing.
- The pictures of the rifleparts in this manual are universal and mend as an example to explain the working principle. They might not be equal to the parts in your rifle.
- Do not attempt to install this regulator yourself if you do not have a clear understanding of how these pcp rifles and regulators work.
- Do not attempt to install this regulator if you are not skilled to work on an airrifle; contact your local gunsmith to do the fitting.
- Installation and operation is done completely at your own risk.
- Installing this regulator might void your rifle's factory warranty.
- Your rifle may never be filled higher in pressure as stated in your rifle's manual.
- Do not attempt to fit this regulator in another rifle as mentioned in our order conformation.
- These regulators are not suitable to use as a CO2 to HPA conversion, this could potentially be harmful or lethal to you or bystanders.
- We cannot be held liable for any accidents in relation to this regulator and its installation.

**Before you start, make sure that the rifle is unloaded, remove the magazine and make absolutely sure ALL the air is drained from the pressure tube. If there is a pressure gauge, it will give you just an indication. Dry fire the rifle or follow the manufactures instructions and double check to make sure all the air is out of the rifle**



**If the regulator is fitted and there is no output pressure after filling the pressure tube, something might be wrong causing the airflow to block totally.**

**Please beware even though there is no output pressure, the pressure tube is fully charged with high pressure air!!**

**If you are not able to relieve the pressure of the pressure tube according to the manufacture instructions or by dry firing the rifle then:**

**Contact a professional gunsmith to retrieve a solution!**

- **DO NOT try to unscrew or to open the pressure tube in any way.**
- **DO NOT try to pierce/drill or to use force to open the pressure tube or unscrew parts in an attempt to relieve the blocked pressure.**
- **These actions can cause serious injury or death to you or bystanders**

**Method 1:**

Drain the pressure tube/air cylinder completely by dry firing or according to the manufactures instructions.

Mark the upper side of the pressure tube, facing the breech side,

Remove the pressure tube/air cylinder from the action of the rifle,

Check the air has been completely drained by pressing on the cylinder valve,



Unscrew the valve body from the pressure tube/air cylinder,

Remove the large O ring from the valve body,

Make sure the valve body and threads are clean and free of grease and oil,

Check the facing of the valve house if there are any scratches or corrosion like on the picture. Polish it on a flat surface if it does, so the reg's o-ring will seal properly.



Make sure the inside of the pressure tube has no scratches or dirt inside it,

Lightly grease the first 7 cm of the pressure tube with silicone grease, (nothing else)

Make sure the O-ring is properly seated in the groove of the plenum/spacer of the regulator and carefully push the regulator into the pressure tube as shown in the picture below.

The regulator needs to be pushed in a few mm further into the pressure tube, so it does not touch the valve house when it is screwed in. (When the tube is pressurized in the end of these instructions the regulator will be pushed on the valve)



(Some regulators have the spacer already attached to the regbody, some have a separate spacer)

Make sure the tiny breath-hole of the regulator body is facing upwards to the breech when the tube is screwed on.

Grease the end face of the valve body with some silicone grease so that the O ring can't be twisted out of the chamber.

Screw the valve body into the pressure tube, then back it off a tiny bit (the thickness of a piece of paper). This allows the regulator to vent, which allows it to operate normally.



Slowly fill the pressure tube and check for leaks,

Once you are sure it is not leaking, screw the pressure tube/air cylinder back into the action,

*If you notice the power spikes every few shots or a climbing speed in your shotstring it means that the regulator is not venting/breathing enough/properly. Check that the threads of the pressure tube and valve body are clean and free of grease, also make sure the valve body is not screwed too tightly into the air cylinder.*

*If this does not cure the problem then proceed to method 2 below.*

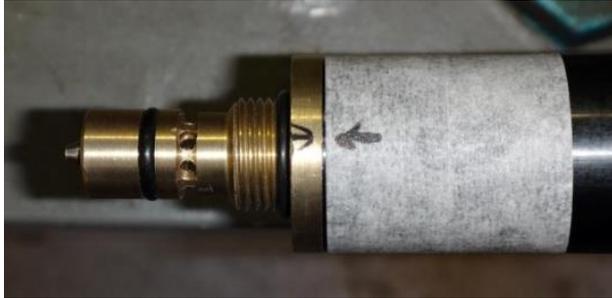
## **Method 2**

This method is more reliable than method 1 because it allows the regulator to vent/breathe better,

There are no adverse structural changes made to the air cylinder and the rifle can be put back to standard after this modification.

Screw the cylinder into the action and make a note of the bottom of the air cylinder,

Remove the cylinder again and mark the bottom of the pressure tube and the valve casing with a pin/scraper, as shown below.



Make sure the pressure tube/air cylinder is completely empty,

Remove the valve body from the pressure tube,

Use a small metal file to make a tiny notch in the end/edge of the pressure tube. This does not have to be very big/deep, see pictures below. Just a very tiny notch.



Following your mark on the valve body, file a small groove in the longitudinal direction of the screw-thread of the valve body.

Use the corner of the file to cut a 45 degree/triangular groove in the threads, as shown below,

*Note that the O ring groove does not get damaged by doing this modification.*

The groove should be cut so that no threads are visible in the groove, this will allow the regulator to breath/vent freely.



To test the modification you can remove the regulator and shim/spacer from the air cylinder,

Screw the valve body into the pressure tube/air cylinder,

Remove the fill valve from the other end of the cylinder,

Put some soapy water on the edge of the valve body/pressure tube and blow (with your mouth) into the fill port end of the cylinder,

If the air duct just created is functioning properly, there will be air bubbles visible when you blow.



If you are happy that the cylinder is venting as it should then remove the valve body,

Fit the regulator and shim/spacer as described in Method 1,

The only difference now is the valve body can be tightened up to the pressure tube completely.

**Our advice for adjusting the pelletspeed.**

If you follow these steps you will have pretty much a optimal balance between air-usage and shotcount.

Remember the regulator will determine the maximum pelletspeed.

- Fill the rifle with air.
- Turn in hammerspring to the maximum tension.
- Do some shots and measure the pelletspeed.
- If the speed is near to what you want then continue. If not, see below.

If you get way to much speed, then lower the reg pressure a bit.

If you do not get enough pelletspeed then increase the reg pressure a bit.

You can in- or decrease it by setting the screw on top of the regulator according to the pressure scale.

- Turn back the hammerspring tension and shoot and measure the speed. Keep doing this until you see the pelletspeed decreasing.
- Now you should have a pretty well balance.

After fitting the regulator, most type of rifle's won't need the factory hammer guide/weight anymore.

You can also experiment with removing weight to reduce air consumption.